CLAIMS

We Claim:

1. A chiral laser projection apparatus for projecting a display image derived from plural component color signals produced by a signal source connected thereto, comprising:

a plurality of display panels, each plural display panel configured to receive and display a particular plural component color signal;

a plurality of chiral lasers; each corresponding to a particular plural display panel and each positioned proximal thereto, wherein said plural chiral lasers are operable to emit light radiation through said plural display panels to form a plurality of color light beams, each plural color beam being representative of a particular color component of the display image; and

combining means for combining said plural color light beams into the display image for projection onto a surface.

2. The chiral laser projection apparatus of claim 1, wherein said plurality of display panels comprises a plurality of LCD panels.

3. The chiral laser projection apparatus of claim 2, wherein said plural component color signals comprise red, green and blue color signal components and wherein said plural LCD panels comprise: a red LCD panel, a green LCD panel, and a blue LCD panel.

4. The chiral laser projection apparatus of claim 1, wherein said plurality of chiral lasers comprises a plurality of CLC film lasers.

5. The chiral laser projection apparatus of claim 4, wherein said plural component color signals comprise red, green and blue color signal components, and wherein said plural CLC film lasers comprise: a red CLC film laser, a green CLC film laser, and blue CLC film laser.

6. The chiral laser projection apparatus of claim 1, wherein said plural chiral lasers each comprise means for optically pumping thereof.

7. The chiral laser projection apparatus of claim 1, further comprising electronic pumping means for electronically pumping said plural chiral lasers.

8. The chiral laser projection apparatus of claim 7, wherein said electronic pumping means comprises the signal source connected to said plural chiral lasers.

9. The chiral laser projection apparatus of claim 1, wherein said combining means comprises a dichroic combiner cube.

10. The chiral laser projection apparatus of claim 1, further comprising focusing means for focusing the display image in conjunction with said combining means.

11. The chiral laser projection apparatus of claim 1, wherein said surface comprises one of: a screen and a diffuse panel.

12. A chiral laser projection apparatus for projecting a display image derived from plural component color signals produced by a signal source connected thereto, comprising:

a plurality of pixellated chiral lasers, each plural pixellated chiral laser configured to receive one of the plural component color signals, wherein said plural chiral lasers are operable to emit light radiation therefrom to form a plurality of color light beams, each plural color beam being representative of a particular color component of the display image; and

combining means for combining said plural color light beams into the display image for projection onto a surface.

13. The chiral laser projection apparatus of claim 12, wherein said plurality of pixellated chiral lasers comprises a plurality of CLC film pixellated lasers.

14. The chiral laser projection apparatus of claim 12, wherein said plural component color signals comprise red, green and blue color signal components, and wherein said plural CLC film pixellated lasers comprise: a red CLC film pixellated laser, a green CLC film pixellated laser, and blue CLC film pixellated laser.

15. The chiral laser projection apparatus of claim 12, wherein each said plural pixellated chiral laser comprises pixellation means for selectively causing each said plural pixellated chiral laser to only emit light radiation from a predefined portion thereof.

16. The chiral laser projection apparatus of claim 12, wherein said plural pixellated chiral lasers comprise means for optically pumping thereof.

17. The chiral laser projection apparatus of claim 12, further comprising electronic pumping means for electronically pumping said plural pixellated chiral lasers.

18. The chiral laser projection apparatus of claim 17, wherein said electronic pumping means comprises the signal source connected to said plural pixellated chiral lasers.

19. The chiral laser projection apparatus of claim 12, wherein said combining means comprises a dichroic combiner cube.

20. The chiral laser projection apparatus of claim 12, further comprising focusing means for focusing the display image in conjunction with said combining means.

21. The chiral laser projection apparatus of claim 12, wherein said surface comprises one of: a screen and a diffuse panel.

22. A chiral laser projection apparatus for projecting a display image derived from plural component color signals produced by a signal source connected thereto, comprising:

a plurality of pixellated chiral lasers, each plural pixellated chiral laser configured to receive one of the plural component color signals, wherein said plural chiral lasers are operable to emit light radiation therefrom to form a plurality of color light beams, each plural color beam being representative of a particular color component of the display image, wherein said plural pixellated chiral lasers are positioned in a stack configuration, such that when said plural pixellated chiral lasers are activated, said plural color light beams are combined into the display image for projection onto a surface.

23. The chiral laser projection apparatus of claim 22, wherein each plural pixellated chiral laser is substantially transparent to plural color beams from other plural pixellated chiral lasers that are projected therethrough.

24. The chiral laser projection apparatus of claim 22, wherein each said plural pixellated chiral laser comprise pixellation means for selectively causing each said plural pixellated chiral laser to only emit light radiation from a predefined portion thereof.

25. The chiral laser projection apparatus of claim 22, wherein said plurality of pixellated chiral lasers comprises a plurality of CLC film pixellated lasers.

26. The chiral laser projection apparatus of claim 22, wherein said plural component color signals comprise red, green and blue color signal components, and wherein said plural CLC film pixellated lasers comprise: a red CLC film pixellated laser, a green CLC film pixellated laser, and blue CLC film pixellated laser.

27. The chiral laser projection apparatus of claim 22, wherein said plural pixellated chiral lasers comprise means for optically pumping thereof.

28. The chiral laser projection apparatus of claim 22, further comprising electronic pumping means for electronically pumping said plural pixellated chiral lasers.

29. The chiral laser projection apparatus of claim 28, wherein said electronic pumping means comprises the signal source connected to said plural pixellated chiral lasers.

30. The chiral laser projection apparatus of claim 22, further comprising focusing means for focusing the display image in conjunction with said combining means.

31. The chiral laser projection apparatus of claim 22, wherein said surface comprises one of: a screen and a diffuse panel.

32. A chiral laser projection apparatus for projecting a display image derived from plural component color signals produced by a signal source connected thereto, comprising:

plural display means, each for receiving and displaying a particular plural component color signal; and

a plurality of chiral lasers, each corresponding to a particular plural display means, and each positioned proximal thereto, wherein said plural chiral lasers are operable to emit light radiation in conjunction with said plural display means to form a plurality of color light beams, each plural color beam being representative of a particular color component of the display image.

33. The chiral laser projection apparatus of claim 32, further comprising combining means for combining said plural color light beams into the display image for projection onto a surface.

34. The chiral laser projection apparatus of claim 32, wherein each said plural display means are one of: a pixellated display panel and a pixellator operable to selectively cause each said plural chiral laser to only emit light radiation from a predefined portion thereof.

35 -36. A method for projecting a display image derived from plural component color signals produced by a signal source connected thereto, comprising the steps of :

(a) providing a plurality of display devices, each operable to receive and display a particular plural component color signal;

(b) providing a plurality of chiral lasers, each corresponding to a particular plural display device and each positioned proximal thereto,

(c) causing said plural chiral lasers to emit light radiation in conjunction with said plural display means to form a plurality of color light beams, each plural color beam being representative of a particular color component of the display image.

37. The method of claim 36, further comprising the step of:

(d) combining said plural color light beams into the display image for projection onto a surface.

38. The method of claim 36, wherein each said plural display device is one of: a pixellated display panel and a pixellator operable to selectively cause each said plural chiral laser to only emit light radiation from a predefined portion thereof.